

11. A BRIEF NOTE ON THE GRANDALA, *GRANDALA COELICOLOR* HODGS.

Both Whistler in "Birds of the Kangra District" and Mienertzhagen in "Birds Collected in Ladakh and Sikkim" when talking of the Grandala mention fast flight, a restless disposition and a predilection for settling on top of trees. My own observations bear out the fast flight and restless disposition but since on all occasions but one I have met the birds above tree-line, I have seen them only on the ground. Overhead they have a starling-like silhouette with triangular wings and a distinctly forked tail. In flight they often circle and glide very much like the Ashy Swallow-Shrike. On the ground, they hop about like chats but without the bobbing, have a very erect stance and continually flick the wings much in the manner a crow does. At this altitude—3500 to 3960 metres—they were feeding on insects—it is surprising how many winged insects, ladybird beetles and the like are wafted aloft on updrafts of warm air coming up from the valleys. I am convinced that quite a substantial amount of food is also procured in flight.

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The one time I saw a huge flock of Grandala below tree-line was on the way to Badrinath (Garhwal) just above Hanuman *Chalti*. There were more than a hundred birds. Here also they were fighting on open hill slopes just above the Alakananda and though freely perching on midstream rocks I never saw them alight on some deodar nearby. The birds had been driven down by a very heavy fall of spring snow. All my other observations have been in the Kulu Himalayas.

The wonderful blue of the male is only apparent in proper light; on most occasions he looks black and is not a very arresting bird. The females are dark brown. In overhead flight a distinct light band shows along the base of her primaries.

The only call I recorded was a *klew . . . klew . . . klew*, which once heard is so characteristic as can always draw attention to a flock of Grandala in the neighbourhood.

All these observations were in the latter half of May.

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12. NOTES ON THE FOOD OF THE BLACKHEADED MUNIA AND THE SPOTTED MUNIA IN SOUTH KAMRUP DISTRICT, WESTERN ASSAM (INDIA)

In connection with studies on the ethology of the Common Weaver Bird or Baya [*Ploceus philippinus* (Linnaeus)], two other common ploceids namely the Eastern Blackheaded Munia [*Lonchura malacca atricapilla* (Vieillot)] and the Burmese Spotted Munia [*Lon-*

chura punctulata subundulata (Godwin-Austen)] were found in company with the Baya invading nurseries of paddy as well as the standing crop which was almost in preharvesting stage. The seeds sown in the nurseries attracted the ploceids greatly. These birds flocked

TABLE I
FOOD OF *Lonchura malacca atricapilla* (VIELLOT)

Example No.	Sex	Date of collection	Locality	Feeding ground from which collection was obtained	Wt. of specimen (after killing)	Total wt. of stomach contents (sun dried)	Items of Food	Percentage	Remarks
1	♂	10-3-75	Rani, S. Kamrup, Assam	Flowering bam-boo thickets and cultivated fields	14.5 gm	300 mg	Paddy (<i>Oryza sativa</i>) with fragments Grits	78 22	
2	♀	-do-	-do-	-do-	15 gm	50 mg	Vegetable matter (bamboo seeds) Grits	60 40	
3	♂	14-3-75	-do-	-do-	14 gm	70 mg	Paddy (<i>Oryza sativa</i>) with fragments, one undigested seed coat (grass) Grits	28.57 71.43	
4	♂	-do-	-do-	-do-	14.5 gm	900 mg	Paddy (<i>Oryza sativa</i>) with fragments Grits	93 7	
5	♂	-do-	-do-	-do-	14 gm	700 mg	Paddy (<i>Oryza sativa</i>) with fragments Seed coats (bamboo seeds) Insect fragments	92.86 5.72 0.71	Fragments beyond iden-tification
6	♀	-do-	-do-	-do-	13.5 gm	350 mg	Grits Paddy (<i>Oryza sativa</i>) with fragments Insect fragments	0.71 85.71 11.43	Fragments beyond iden-tification
7	♂	-do-	-do-	-do-	13.5 gm	340 mg	Grits Paddy (<i>Oryza sativa</i>) with fragments Grits	2.86 88.24 11.76	
8	♂	-do-	-do-	-do-	14.5 gm	160 mg	Paddy (<i>Oryza sativa</i>) with fragments Grits	93.75 6.25	
9	♂	-do-	-do-	-do-	14 gm	60 mg	Vegetable fragments (bamboo seeds) Grits	50 50	
10	♂	-do-	-do-	-do-	14.5 gm	60 mg	Vegetable fragments (bamboo seeds) Grits	50 50	
11	♂	16-3-75	-do-	-do-	14.5 gm	100 mg	Paddy (<i>Oryza sativa</i>) with fragments Grits	30 70	
12	♀	-do-	-do-	-do-	14 gm	90 mg	Paddy (<i>Oryza sativa</i>) with fragments Grits	33 67	
13	♂	-do-	-do-	-do-	15 gm	270 mg	Paddy (<i>Oryza sativa</i>) with fragments Grits	78 22	
14	♂	-do-	-do-	-do-	13.5 gm	100 mg	Vegetable matter (bamboo seeds) Grits	20 80	

TABLE II
 FOOD OF *Lonchura punctulata subundulata* (GODWIN-AUSTEN)

Example No.	Sex	Date of collection	Locality	Feeding ground from which collection was obtained	Wt. of specimen (after killing)	Total wt. of stomach contents (sun dried)	Items of Food	Percentage
1	♀	10-3-75	Rani, S. Kamrup, Assam	Flowering bamboo thickets and cultivated fields	15 gm	220 mg	Vegetable matter (bamboo seeds) Grits	73 27
2	♀	-do-	-do-	-do-	14 gm	230 mg	Paddy (<i>Oryza sativa</i>) with fragments Vegetable matter (bamboo seeds) Grits	26.08 43.48 30.44

in hundreds from nearby sugarcane fields, bamboo thickets and tall grass growing in marshes.

The Eastern Blackheaded Munia is confined to Assam, Manipur and Bangladesh west to eastern Nepal, eastern and southern Bihar and northern Orissa, and the Burmese spotted Munia is distributed in Assam and Bangladesh in the plains and up to c 1800 metres. Both are resident species of western Assam, and are found moving in flocks from one area to another invading crop and grasses in flower. Mason and Maxwell-Lefroy (1912, pp. 123-124) stated that the Blackheaded Munia damages ripe paddy. They also examined the stomach-contents of three examples of the Spotted Munia. Out of these three birds, one took two injurious insects but all of them had taken weed seeds. They further remarked that this common species do some considerable damage to grain, especially paddy, but a large percentage of food in all probability consists of small weed-seeds and sometimes of insects. Whistler (1963, pp. 215-216) stated that the Spotted Munia feeds largely in low-seeding herbage. Ali & Ripley (1974, pp. 115-118) stated that the food of the Eastern Blackheaded Munia consists of grass-seeds and rice; and that of the Burmese Spotted Munia grass-seeds, rice, lantana berries, etc.

Some 14 examples of the Blackheaded Munia and two examples of the Spotted Munia were collected from Rani, Kamrup district, Western Assam in mid-March 1975. All the birds were in non-breeding condition. The collections were made from two different feeding grounds. One group was obtained from cultivated fields and the other from bamboo thickets. It was interesting to observe that since some of the bamboo was in flower, there was a large number of birds on these, presumably feeding on the bamboo-seeds which blossom and seed once

in 20 years approximately. Birds taken in mist-nets or shot were immediately dissected, and the contents recovered from the crop and stomachs, were sun-dried. Analysis of the contents of the two species is given below in Table Nos. I & II.

From the above analysis, it appears that bulk of the food of the above two species of munias consists mainly of vegetative matters, (approximately 82 per cent), about 46 per cent consist of paddy and 36 per cent seeds of bamboo and other weed grasses. The remaining 17 per cent have been found to be grit and about one per cent only of animal matter.

The bayas and munias that concentrated in large numbers in a small area of one square kilometre approximately in Rani where this study was made, was estimated to have a population of 1000+ of each species of munias. It was observed that they congregated in large numbers on the nursery of paddy and caused a considerable damage to the paddy cultiva-

tion. The local cultivators drive away the birds from such affected nurseries and mature crop employing boys to pelt stones and beat drums. From the analysis of their crop and stomach-contents, it is evident that their first choice as food is grains of paddy.

It has been observed that the munias made 20 trips on average during the whole day from their roost of sugarcane and bamboo thickets to the nursery and standing crop of paddy. Each bird consumed about five grams of paddy in a day. When a flock of 2000+ munias were operating in an area of one square kilometre, the average loss as estimated was nearly five kilogrammes per day per species. This loss is quite substantial to the cultivators.

In conclusion it may be stated that both species, the Blackheaded Munia and the Spotted Munia are definitely harmful to cultivation and could be categorised as serious cereal pests in Western Assam.

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13. NOTE ON THE STATUS OF THE GIR CROCODILES

(With a plate)

The superintendent of Gir National Park, Sanat Chavan provided transport for me to visit Hiran Lake the morning after my arrival at Sasan Gir on 28 May 1975. Jeevan Lal, a maldhari

(herder) who had assisted Paul Joslin's lion study, was my guide for the next few days. I spent the first day making a round of Hiran Lake, the reservoir formed by the Kamleshwar